

Huge Antrochoanal polyp with unusual presentation

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ABSTRACT

Antrochoanal polyps (ACPs) are an infrequent type of nasal polyp that account for about 3-5% of all type of nasal polyps. In our case, we report a 70-year-old female with an unusually huge antrochoanal polyp that presents with severe epistaxis episodes, which were managed by complete excision via endoscopic sinus surgery.

Keywords: Antrochoanal polyps, Nasal polyp, epistaxis, endoscopic sinus surgery, Rhinology

1. INTRODUCTION

An ACP is a benign lesion of maxillary origin that enlarges through the maxillary antrum and protrudes to the nasal cavity and gradually prolapses toward the nasopharynx. It is also called a Killian polyp, as Killian described this disease in detail in 1906 (Killian, 1906). ACPs are infrequent, representing only 4–6% of all nasal polyps (Lee & Huang, 2006). In the current case, we report an adult female with an unusually giant antrochoanal polyp that presents with epistaxis episodes.

2. CASE PRESENTATION

The patient was a 70-year-old Saudi female, married, and a housewife. Patient is a known case of diabetes mellitus type 2, HTN and hypothyroidism. She appeared at the hospital's emergency department (ED) in July 2021 with complaints of nasal obstruction and recurrent nasal bleeding from the right side, and her condition was associated with episodes of headache. According to the patient, she had a similar episode in March 2021 for which she was admitted and treated conservatively. Moreover, according to the patient, there has been a previous history of similar attacks in the form of progressive unilateral nasal obstruction since 2019, associated with thick nasal discharge and on and off Epistaxis started as mild and then progressed to severe, for which she needed to come to the ER to be managed with nasal packing. Also, during her previous ER visit in 2019, a CT PNS (figure 1) was ordered, which revealed a smooth expansion of the right maxillary sinus with soft tissue density lesion that expanded the maxillary ostium extending into the right-sided nasal cavity, and partial opacification of the right frontal sinus, and right-sided ethmoidal sinus groups as well.



In March 2021, the patient was admitted, and an endoscopic nasal examination revealed an obstructed mass obliterating the whole right nasal cavity associated with the bleeding. Furthermore, a CT scan (figure 2 and 3) was ordered, which showed complete opacification of right-side ethmoidal air cells associated with an increased mucosal wall thickness of the right maxillary and right sphenoidal sinus. The nasal septum deviated to the right, and the impression was a huge right-side ACP with evidence of pansinusitis more marked on the right side.



Figure 1 (CT PNS showing mass obliterating the right nasal cavity)

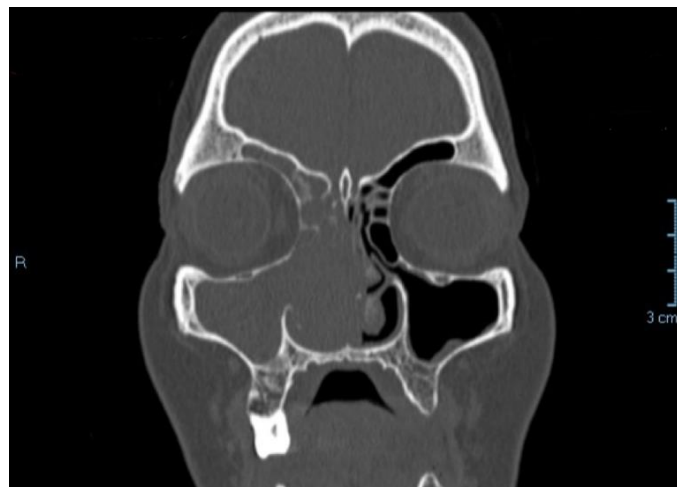


Figure 2 & 3 (CT PNS showed complete opacification of right-side ethmoidal air cells associated with an increased mucosal wall thickness of the right maxillary and right sphenoidal sinus)

In July 2021, the patient was admitted again for further evaluation. A complete general physical examination was done, and nothing abnormal was detected. A nasal cavity examination was performed with a nasal endoscope, which showed a smooth, pale, polypoidal mass, grade 4, based on Meltzer's et al. classification, filling the right nasal cavity.

The results of routine blood tests were within normal ranges. The CT PNS figure (4) was repeated during this admission, which showed that the right maxillary sinus was expanded by a soft tissue mass-like lesion that extended and widened the maxillary ostium to the right nasal cavity and to the left side of nasopharynx, keeping with ACP. This polyp obliterates the right nasal cavity completely. Other conditions presented included complete opacification of the right frontal and right sphenoidal sinuses, associated with complete opacification of right-side ethmoidal air cells, increased mucosal wall thickness of the right maxillary and right sphenoidal sinus, and a deviated nasal septum to the right. The visualized osseous structures were unremarkable.



Figure 4 (CT PNS showed that the right maxillary sinus was expanded by a soft tissue mass-like lesion that extended and widened the maxillary ostium to the right nasal cavity and to the left side of nasopharynx)

Further imaging evaluation was done in the form of head and paranasal sinuses MRI figure (5, 6 and 7) which revealed a mass at the right nasal cavity extended to the right maxillary antrum keeping with inverted papilloma associated with secondary sinusitis of the right maxillary, right frontal, and right ethmoidal air cells.

The patient was planned for surgical intervention in July, but as a result of COVID-19 restrictions, surgery was delayed to August. In August 2021, endoscopic sinus surgery was performed on the patient for which the mass was successfully excised and sent for histopathology with no complications. As per histopathology findings (figure 8 and 9), microscopically, it was a polyp, lined with respiratory epithelium widely ulcerated without atypia. The stroma was edematous with infiltrate (lymphocytes, plasma cells, eosinophils, neutrophils, mast cells). Some of the examined fragment's granulomas were associated with the polyp. It was ulcerated with lobular capillary hemangioma and diagnosed as an ulcerated sinonasal antrochoanal polyp.

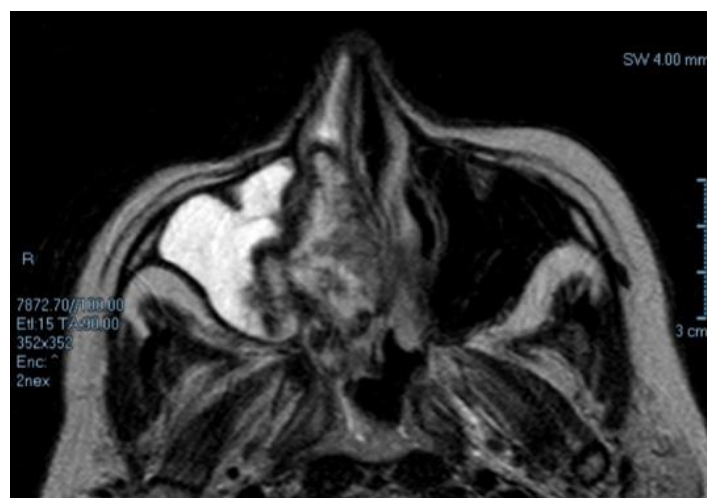


Figure 5, 6 and 7 (MRI revealed a mass at the right nasal cavity extended to the right maxillary antrum keeping with inverted papilloma associated with secondary sinusitis of the right maxillary, right frontal, and right ethmoidal air cells)

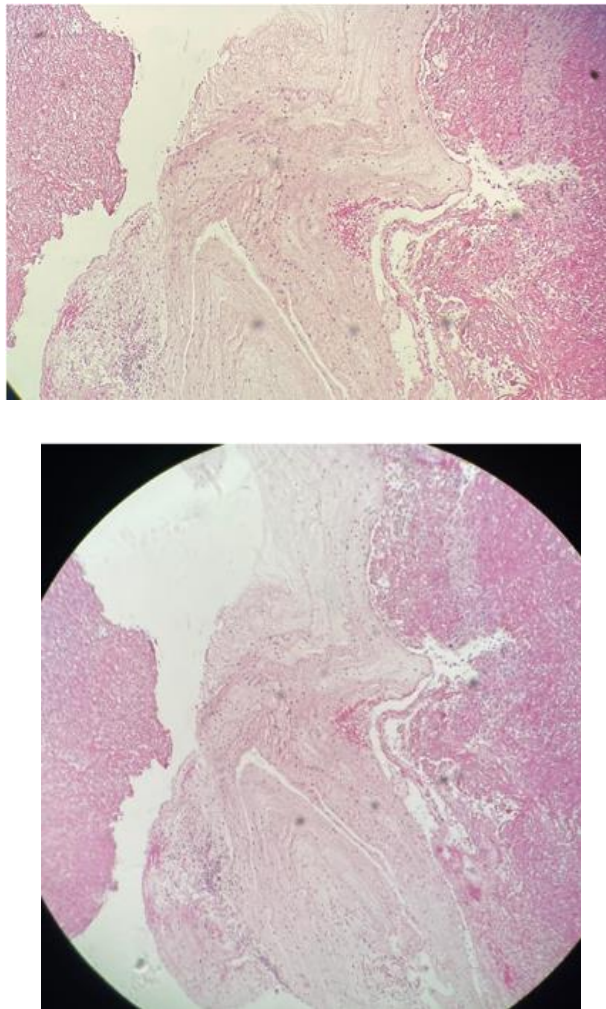


Figure 8 and 9 (histopathology findings microscopically, it was a polyp, lined with respiratory epithelium widely ulcerated without atypia)

Differential diagnosis

For the patient, it was hard to identify the precise diagnosis, even though the histopathological findings could not have been cleaner cut. From the patient history, examination, and operative findings, all suggested an atypical inflammatory antrochoanal polyp with suspicion of neoplasm. Other differentials, such as inverted papilloma and benign nasal mass, could not be ruled out.

Plan of care

The patient was followed up regularly in the ENT Clinic post-operatively.

Outcome and follow-up

The patient did well post-operatively with no active complaints after two months. On examination, there were no signs of recurrence. The nasal cavity mucosal lining was healthy and looked in good shape. Furthermore, the patient was advised to have regular follow-ups in the ENT clinic.

3. DISCUSSION

ACPs are an infrequent type of nasal polyp that accounts for about 4–6% of all nasal polyps. Professor Killian initially defined it in 1906 as a hypertrophic nasal mass of the posterior wall mucosa of the maxillary sinus caused by an unknown etiology (Touihem & Nakkabi, 2021). Typically, patients present with symptoms associated with sinus drainage dysfunction, such as headache and nasal blockage. A lesion may grow through the sinuses into the nasal cavity, choana, and nasopharynx, resulting in more severe symptoms (Aydın, 2018). As per the current case, the patient had unusual presentation of ACP with massive nasal obstruction and

severe epistaxis. Furthermore, our patient was a 70-year-old female, making this report unique, as the average age for a patient with such a polyp is below 40 years old (Özdek et al., 2006; Cetinkaya, 2008).

ACP patients usually present with unilateral nasal obstruction, which is the most common symptom. Also, the patient may have other symptoms like headache, nasal discharge, and epistaxis (Chung et al., 2002). In the presented case, nasal obstruction associated with severe nasal epistaxis is a worrisome presentation that needs immediate intervention. This uncommon presentation is comparable to that reported by Cetinkaya et al., (2008) with the same age group and presentation. The patient diagnosis was approached by endoscopic examination and imaging with CT and MRI recommended by many studies (De Vuysere, 2001). In the presented case, a CT scan showed complete pacification of right-side ethmoidal air cells associated with an increased thickness of the mucosal wall of the right maxillary. An enhanced MRI was ordered to confirm CT findings, which showed a right nasal mass occupying all the maxillary sinus extended and widened the maxillary ostium to the right nasal cavity and to the left side of the nasopharynx. Such distractive unusual findings raise some doubt regarding the diagnosis, but histopathology, the anatomic location and connection with a sinus polyp enables an accurate diagnosis (Cetinkaya, 2008).

Treatment for ACP by complete surgical removal with functional endoscopic surgery through the middle meatus is the preferred and recommended intervention, as it replaces the old practice with caldwell-luc antrostomy (Yanagisawa, 2005). Endoscopic sinus surgery with anterior and posterior ethmoidectomy was performed in the presented case, and the mass was traced until it appeared in the maxillary ostium, emanating from it and widening it, before being removed with non-cutting forceps. The literature suggests this procedure since it is preferred for complete excision and lower recurrence rates (Špadijer-Mirković, 2015).

4. CONCLUSION

In such a rare case, ACP should always be considered as a differential diagnosis. To avoid problems, such a patient should be treated as quickly as feasible. The preferred and recommended solution is complete surgical removal using functional endoscopic sinus surgery, which has superseded the traditional method of caldwell-luc antrostomy.

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Author Contributions

Fatimah Saleh Alkhalifah: First Author, writing manuscript

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Informed Consent

Written consent was obtained from the patient who was reported in the study.

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Conflict of interest

The authors declare that there are no conflicts of interest.

Data and materials availability

All data associated with this study are present in the paper.

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